



3HP DIRECT DRIVE COMPRESSOR

MODEL NO: RAIDER 55, RAIDER 100, RAIDER 105

PART NO: 2225800, 2225805, 225810

OPERATION & MAINTENANCE INSTRUCTIONS



0112

INTRODUCTION

Thank you for purchasing this CLARKE 3HP Direct Drive Compressor.

Before attempting to use this product, please read this manual thoroughly and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to your purchase giving you long and satisfactory service.

GUARANTEE

This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

PARTS AND SERVICING

For Parts & Servicing, please contact your nearest dealer, or CLARKE International, on one of the following numbers.

PARTS & SERVICE TEL: 020 8988 7400

PARTS & SERVICE FAX: 020 8558 3622

or e-mail as follows:

PARTS: Parts@clarkeinternational.com

SERVICE: Service@clarkeinternational.com

SAFETY PRECAUTIONS

Before using your compressor it is in your own interest to read and pay attention to the following safety rules

1. Compressed air is dangerous, NEVER direct a jet of air at people or animals, and NEVER discharge compressed air against the skin.
2. DO NOT operate your compressor with any guards removed.
3. Electrical or mechanical repairs should only be carried out by a qualified engineer. If problems occur, contact your Clarke dealer.
4. Before carrying out any maintenance, ensure the pressure is expelled from the air receiver, and the machine is disconnected from the electrical supply.
5. DO NOT leave pressure in the receiver overnight, or when transporting.
6. DO NOT adjust, or tamper with the safety valves. The maximum pressure is factory set, and clearly marked on the machine.
7. DO NOT operate in wet or damp conditions. Keep the machine dry at all times. Similarly, a clean atmosphere will ensure efficient operation. Do not use in dusty or otherwise dirty locations.
8. Some of the metal parts can become quite hot during operation. Take care not to touch these until the machine has cooled down.
9. Always set the pressure regulator to the recommended setting for the tool.
10. When spraying flammable materials e.g. cellulose paint, ensure that there is adequate ventilation and keep clear of any possible source of ignition.
11. Before spraying any material always consult paint manufacturers instructions for safety and usage.
12. Protect yourself. Goggles will protect your eyes from flying particles. Face masks will protect you against paint spray and/or fumes.
13. Do not exert any strain on electrical cables and ensure that air hoses are not kinked or wrapped around machinery etc.
14. When disconnecting air hoses or other equipment from your compressor ensure that the air supply is turned off at the machine outlet and vent all pressurised air from within the machine and other equipment attached to it.
15. Make sure that children and animals are kept well away from the compressor and any equipment attached to it.
16. Always ensure that all individuals using the compressor have had the necessary training and have read and fully understand these operating instructions.
17. Ensure that any equipment or tool used in conjunction with your compressor, has a safe working pressure exceeding that of the machine.
18. Exercise caution when transporting the machine to avoid tipping the machine over.
19. Permanently installed systems should be installed by a competent engineer.
20. These Machines produce noise levels in excess of 70dB(A). Persons working in the vicinity of the machine must be provided with suitable ear protection.

ELECTRICAL CONNECTIONS



WARNING! Read these electrical safety instructions thoroughly before connecting the product to the mains supply.

Before switching the product on, make sure that the voltage of your electricity supply is the same as that indicated on the rating plate. This product is designed to operate on 230VAC 50Hz. Connecting it to any other power source may cause damage.

This product may be fitted with a non-rewireable plug. If it is necessary to change the fuse in the plug, the fuse cover must be refitted. If the fuse cover becomes lost or damaged, the plug must not be used until a suitable replacement is obtained.

If the plug has to be changed because it is not suitable for your socket, or due to damage, it should be cut off and a replacement fitted, following the wiring instructions shown below. The old plug must be disposed of safely, as insertion into a mains socket could cause an electrical hazard.

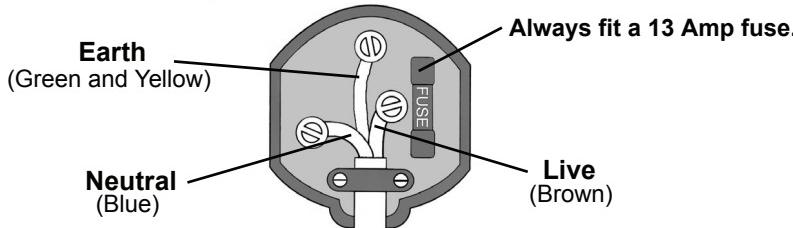


WARNING! The wires in the power cable of this product are coloured in accordance with the following code:
Blue = Neutral Brown = Live Yellow and Green = Earth

If the colours of the wires in the power cable of this product do not correspond with the markings on the terminals of your plug, proceed as follows.

- The wire which is coloured **Blue** must be connected to the terminal which is marked **N** or coloured **Black**.
- The wire which is coloured **Brown** must be connected to the terminal which is marked **L** or coloured **Red**.
- The wire which is coloured **Yellow and Green** must be connected to the terminal which is marked **E** or $\frac{1}{3}$ or coloured **Green**.

Plug must be BS1363/A approved.



Ensure that the outer sheath of the cable is firmly held by the clamp

We strongly recommend that this machine is connected to the mains supply via a **Residual Current Device (RCD)**

If in any doubt, consult a qualified electrician. DO NOT attempt any repairs yourself.

INSTALLATION



Warning: Before assembling and using the air compressor, make sure that you have read and understood all of the safety instructions.

INSTALLATION

Take care when lifting the compressor from the packaging.

After removing the compressor from its packaging, check the integrity of the unit, making sure it has not been damaged in transit.

Before connecting your compressor to the mains supply, check the following:-

- Firstly, ensure the compressor is on level ground. Do not allow it to run if it is standing on an incline.
- Check that the mains voltage corresponds with that shown on the data label on the compressor.
- The ON/OFF switch is in the OFF (pressed down) position.

MOVING THE AIR COMPRESSOR

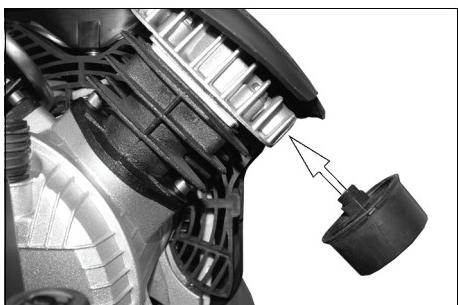
Before moving the compressor, switch off and disconnect it from the mains power supply.

- Always use the handle.
- Do not lift by (or put strain on) fittings, valves or hoses.
- Take care when moving the compressor to avoid damaging the valves or fittings.

The compressor is heavy, get assistance when lifting or moving this compressor to avoid personal injury.

FIT THE AIR FILTERS

1. Screw the air filter into position as shown.
 - The air filters should be hand tight, Do not over tighten.



BEFORE USE

If the compressor has not been used for 24 hours or more, open the drain valve to drain any condensate which may have accumulated. See page 8

CHECK THE OIL LEVEL

The compressor is supplied without any oil inside.

1. Make sure that the oil level is half way up the oil sight glass.
2. If not, remove the oil cap and top up the reservoir.
 - Only use SAE30 compressor oil, available from your Clarke Dealer Part No. 3050801).



ATTACH AIR TOOLS



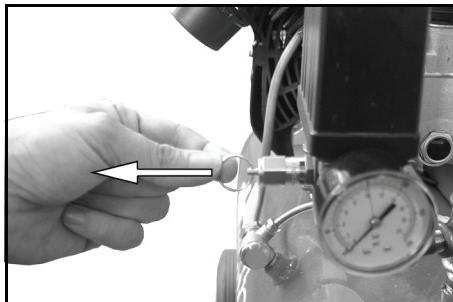
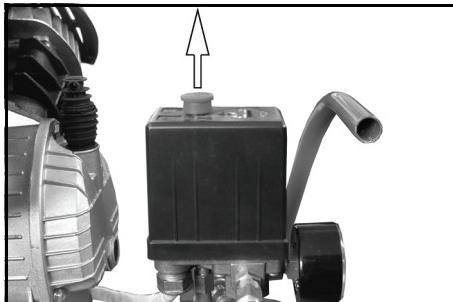
WARNING: BEFORE CONNECTING ANY AIR TOOLS, MAKE SURE YOU HAVE READ ANY INSTRUCTIONS SUPPLIED WITH THE TOOL, ALSO ENSURE THAT THE TOOL IS COMPATIBLE WITH THE COMPRESSOR AND HOSE SPECIFICATIONS.

Attach the air hose to the regulator (if fitted).



OPERATION

1. Insert the mains plug into the mains socket and switch on the power.
 - The mains voltage must be 230V.
2. Lift the red On/Off switch.
 - The compressor will make a continuous loud noise when the tank is charging - this is normal.
 - The compressor will charge the main tank to 8 bar (116 psi) then switch off.
 - The compressor will restart automatically whenever the pressure in the main tank falls below a certain level.
3. Check the safety valve daily by pulling on the ring attached.
 - Air should be released you pull the ring and stop when released.
 - If the valve does not operate as described, or if the valve is stuck, it must be replaced by qualified service personnel before using the compressor.



WARNING: DO NOT REMOVE OR ATTEMPT TO ADJUST THE SAFETY VALVE.

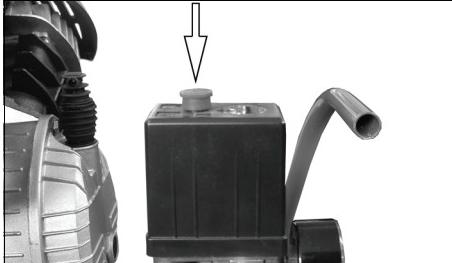


4. Select the pressure you need using the pressure regulator. (if fitted)

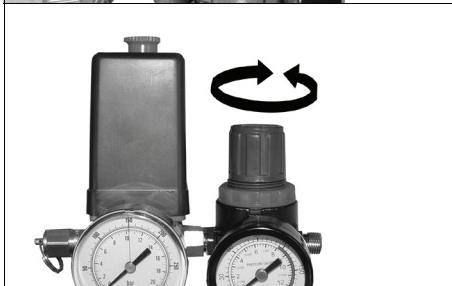


SHUTTING DOWN THE COMPRESSOR

1. Press down on the on/off button to turn the compressor OFF.



2. Set the pressure regulator to its lowest setting, i.e. fully anticlockwise (if fitted).
3. Trigger the equipment (spraygun, air tool etc), to release air from the air hose before disconnecting the hose from the machine.
4. Disconnect the compressor for the mains supply.
 - You should never leave the compressor air tank unattended while under pressure.
 - Always release the pressure from the tank when not in use or prior to storage, as described in the following section.



DRAINING THE TANK



CAUTION: YOU MUST DRAIN THE TANK AFTER USE AND BEFORE YOU STORE YOUR COMPRESSOR..

1. Turn the compressor off and disconnect from the mains supply.
 - Place a suitable container beneath the compressor to catch any condensation.
2. Carefully undo the drain valve, If you hear a hissing noise, this is the sound of the reservoir depressurising.
3. When the tank has drained fully, re-tighten the drain valve.

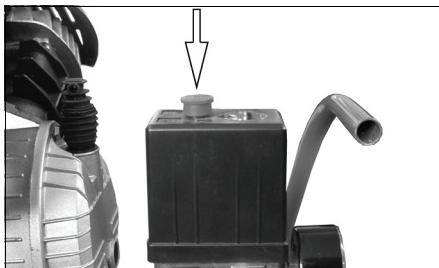


REMOVING TOOLS FROM THE AIR HOSE

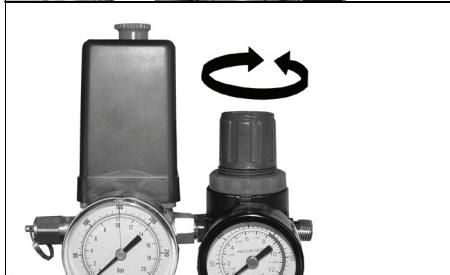


WARNING: ALWAYS SET THE PRESSURE REGULATOR TO ZERO BEFORE ATTEMPTING TO REMOVE OR REPLACE A TOOL.

1. Press the red On/Off switch down to the OFF position to stop the compressor.



2. Set the pressure regulator to its lowest setting, i.e. fully anticlockwise (if fitted). •
3. Trigger the equipment (spraygun, air tool etc), to release air from the air hose before disconnecting the hose from the machine.

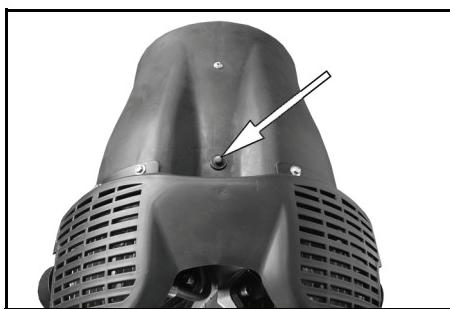


RESET BUTTON

This compressor is equipped with a thermal overload device, which operates as a safety device to protect the motor.

When the motor overheats for any reason, the overload cutout automatically cuts the power thereby preventing damage to the motor.

Wait around 5 minutes for the motor to cool and press the reset button.



If you restart the compressor and the overload cutout activates again, switch off the compressor, remove the plug from the mains and have your compressor checked by a qualified service agent.

MAINTENANCE

CHECKING THE OIL LEVEL (DAILY)

Ensure the oil level is between the min and max marks on the dipstick and top-up if necessary.

- Only use SAE30 compressor oil, available from your Clarke Dealer (Part No. 3050801).

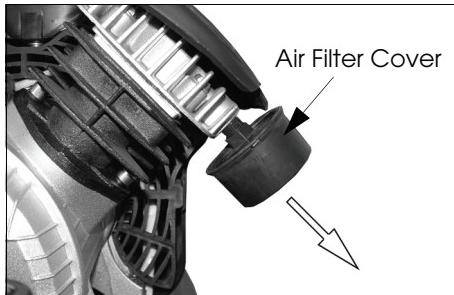
DRAIN THE TANK (DAILY)

After use, always open the drain valve to ensure that any condensate is drained off.

CLEANING THE AIR INTAKE FILTER (MONTHLY)

The air intake filter should be inspected on a MONTHLY basis, and more often in dusty conditions,

1. Pull the filter cover away from the compressor as shown.



2. Remove the sponge filter from the filter cover.



3. Clean the sponge and the filter cover using a soft brush.

- If necessary, the sponge filter may be gently washed in warm soapy water,
- Rinse and allow the filter to dry thoroughly before refitting.

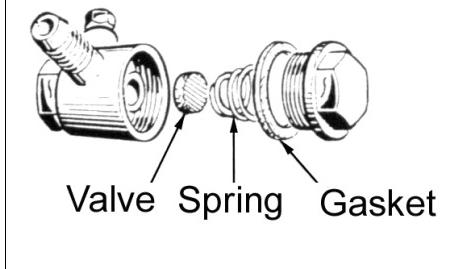
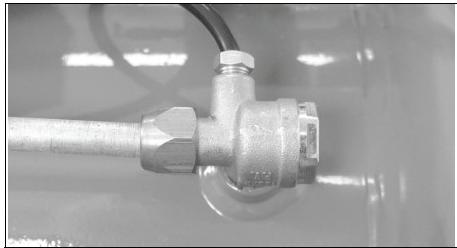
4. Ensure that the filter and filter cover is then placed back into its original position.

- If any part of the filter is damaged, you should obtain a replacement.

CHECK THE NON RETURN VALVES (EVERY 6 MONTHS)

If the tank pressure decreases for no apparent reason, it is possible that the non-return valve is leaking. To check, ensure the tank is not under pressure and the machine switched OFF.

1. Examine the non-return valve, and replace the gasket and valve if necessary.



SPECIFICATIONS

	RAIDER 50	RAIDER 100	RAIDER 105
Max. Pressure	8 Bar, 116 psi	8 Bar	8 Bar, 116 psi
Air Displacement	14.5 CFM	14.5 CFM	14.5 CFM
Receiver Capacity	50 L	100 L	100 L
Fuse Rating	13 A	13 A	13 A
Dimensions (L x W x H) mm	820 x 420 x 740	1100 x 570 x 820	1165 x 420 x 1050
Guaranteed Sound Power Level	97 dB(A)		97 dB(A)
Weight	46 kg	60 kg	55 kg
Compressor Oil	SAE 30	SAE 30	SAE 30

Please note that the details and specifications contained herein, are correct at the time of going to print. We reserve the right to change specifications at any time without prior notice.

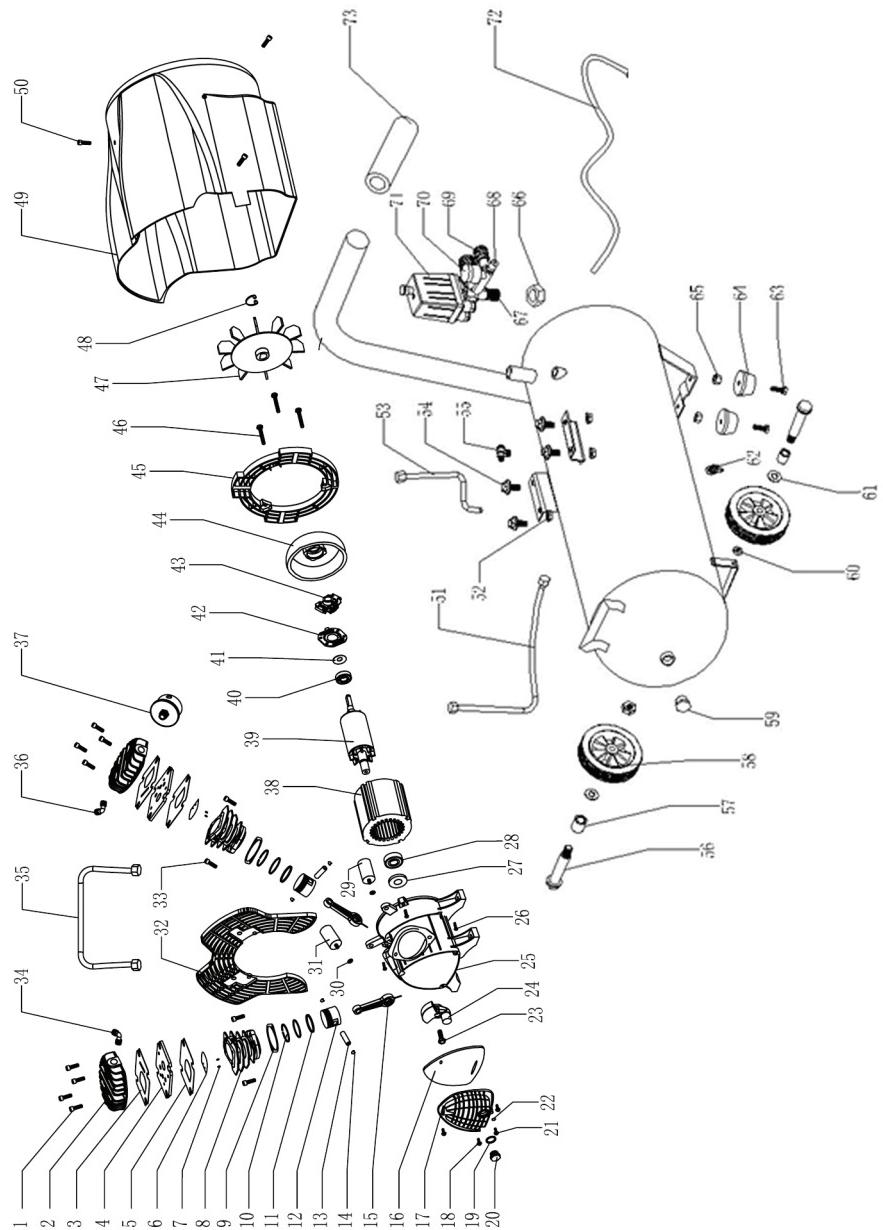
TROUBLESHOOTING



CAUTION: DO NOT ATTEMPT ANY REPAIR OR ADJUSTMENT IF YOU ARE UNCERTAIN AS TO HOW IT SHOULD BE DONE. IF YOU HAVE ANY QUERIES, CONTACT YOUR CLARKE DEALERMACHINE MART.

PROBLEM	PROBABLE CAUSE	REMEDY
The compressor stopped and does not start.	Bad connections.	<ol style="list-style-type: none">1. Check electrical connections.2. Clean and tighten as necessary.
	Overload cutout switch has tripped or duty cycle has been exceeded.	<ol style="list-style-type: none">1. Switch off and wait approx 5 minutes.2. Press the reset button and switch on again.
	Motor windings burnt out.	<ol style="list-style-type: none">1. Contact your Clarke dealer for a replacement motor.
The compressor does not reach the set pressure and overheats easily.	Compressor head gasket blown or valve broken.	<ol style="list-style-type: none">1. Wait for compressor to cool down,2. Disassemble head gasket3. Replace any broken components.4. Carefully clean all sealing surfaces before reassembling. <p>If in doubt contact Your Clarke dealer.</p>
Compressor does not start.	Air receiver charged	<ol style="list-style-type: none">1. Open drain valve to expel air. Compressor should start again when pressure reduces.
Air leaking from the pressure switch valve when the compressor is not running.	Faulty non-return valve.	<ol style="list-style-type: none">1. Drain receiver completely of air.2. Remove the valve end plug,3. Carefully clean the valve seat and the gasket4. Reassemble.
Air pressure from the regulator will not adjust.	The diaphragm within the regulator body is broken.	<ol style="list-style-type: none">1. Replace regulator
The compressor is very noisy and makes a metallic knocking sound.	Compressor damaged and needs overhaul.	<ol style="list-style-type: none">1. Return the machine to your nearest service agent.

EXPLODED DIAGRAM & PARTS LIST



EXPLODED DIAGRAM & PARTS LIST

No	Description	Part No
1	Bolt M6 x 55	ZXSED14C01
2	Cylinder Head	ZXSED14C02
3	Cylinder Head Gasket	ZXSED14C03
4	Valve Plate	ZXSED14C04
5	Valve Plate Gasket	ZXSED14C05
6	Valve	ZXSED14C06
7	Valve Fixing	ZXSED14C07
8	Cylinder	ZXSED14C08
9	Cylinder Gasket	ZXSED14C09
10	Piston Ring	ZXSED14C10
11	Scraper Ring	ZXSED14C11
12	Piston	ZXSED14C12
13	Piston Pin	ZXSED14C13
14	Circlip	ZXSED14C14
15	Connecting Rod	ZXSED14C15
16	Rubber Gasket	ZXSED14C16
17	Crank Case Cover	ZXSED14C17
18	Bolt M5 x 16	ZXSED14C18
19	Oil Leveller Gasket	ZXSED14C19
20	Oil Leveller	ZXSED14C20
21	Bolt M6 x 10	ZXSED14C21
22	'O' Circlip 5.6 x 1.8	ZXSED14C22
23	Hex Bolt M8 x 22	ZXSED14C23
24	Crank	ZXSED14C24
25	Crank Case	ZXSED14C25
26	Bolt M6 x 40	ZXSED14C26
27	Sealing Ring	ZXSED14C27
28	Bearing 6204	ZXSED14C28
29	Capacitor	ZXSED14C29
30	Nut M8	ZXSED14C30
31	Capacitor	ZXSED14C31
32	Crankcase Support	ZXSED14C32
33	Bolt M8 x 25	ZXSED14C33
34	Elbow	ZXSED14C34
35	Connecting Pipe	ZXSED14C35
36	Elbow	ZXSED14C36
37	Air Filter	ZXSED14C3
38	Stator	ZXSED14C38

No	Description	Part No
39	Rotor	ZXSED14C39
40	Bearing 6202	ZXSED14C40
41	Wave washer D35	ZXSED14C41
42	Centrifugal Switch	ZXSED14C42
43	Centrifugal	ZXSED14C43
44	Cover	ZXSED14C44
45	Housing Support	ZXSED14C45
46	Bolt M5 x 30	ZXSED14C46
47	Fan	ZXSED14C47
48	Circlip	ZXSED14C48
49	Fan Cover	ZXSED14C49
50	ST 4.8 x 16	ZXSED14C50
51	Delivery Pipe	ZXSED14C51
52	Nut M8	ZXSED14C52
53	Bleed Pipe	ZXSED14C53
54	Hex Bolt M8 x 25	ZXSED14C54
55	Non Return Valve	ZXSED14C55
56	Axle	ZXSED14C56
57	Axle Set	ZXSED14C57
58	Wheel	ZXSED14C58
59	Plug	ZXSED14C59
60	Nut M10	ZXSED14C60
61	Even Mat	ZXSED14C61
62	Drain Plug	ZXSED14C62
63	Hex Bolt M8 x 25	ZXSED14C63
64	Foot	ZXSED14C64
65	Nut M8	ZXSED14C65
66	Nut	ZXSED14C66
67	Nipple	ZXSED14C67
68	Safety Valve	ZXSED14C68
69	QR Nut	ZXSED14C69
70	Pressure Gauge	ZXSED14C70
71	Pressure Switch	ZXSED14C71
72	Mains Lead	ZXSED14C72
73	Rubber Handle	ZXSED14C73
74	Overload 15A	ZXSED14C74
'5	Cylinder Head Cover	ZXSED14C75

DECLARATION OF CONFORMITY



Clarke®
INTERNATIONAL

Hemnall Street, Epping, Essex CM16 4LG

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following directive(s):

- 2004/108/EC Electromagnetic Compatibility Directive.
- 2006/42/EC Machinery Directive.
- 2006/95/EC Low Voltage Equipment Directive.
- 2002/95/EC Restriction of Hazardous substances.
- 2009/105/EC Simple Pressure Vessel Directive.
- 97/23/EC Pressure Equipment Directive.

The following standards have been applied to the product(s):

- EN 60204-1:2006+A1:2009, EN 61000-6-3:2007+A1:2001 EN 61000-6-4:2007+A1:2011,
- EN 1012-1:2010, EN 55014-1:2006+A2:2011, EN 55014-2:1997+A1:2001+A2:2008.

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned directive(s) has been compiled and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2012

Product Description: Air Compressors.

Model number(s): Raider 55,100,105.

Serial / batch Number: N/A

Date of Issue: 23/01/2012.

Signed:

J.A. Clarke
Director

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Clarke® QUALITY PRODUCTS



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